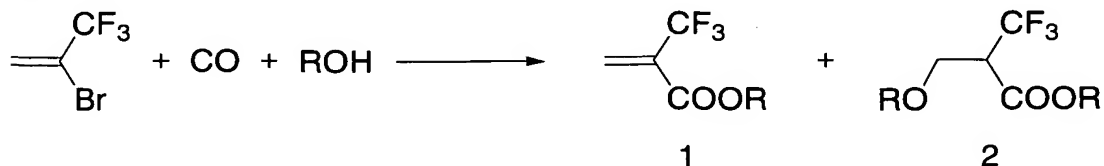




EXAMPLE



An autoclave was charged with $\text{CH}_2=\text{C}(\text{CF}_3)\text{Br}$ (5.7 mmol), $(\text{Ph}_3\text{P})_2\text{PdCl}_2$ (0.1 mmol), an alcohol (7.2 mmol), and a base (Bu_3N or Pr_3N , 6.3 mmol). The system was pressurized with carbon monoxide to 5 MPa, and the reaction mixture was then stirred at 100°C for a predetermined period of time. I analyzed the reaction mixture to determine the products listed in the following table as Entries 1 to 5. These experiments were made in accordance with the production method of Matteoli article to produce fluorine-containing acrylic acid esters, and this example is cited from the description in Table 4 on page 289 of Matteoli article. In the same manner, an autoclave was charged with $\text{CH}_2=\text{C}(\text{CF}_3)\text{Br}$ (1.0 mmol), $(\text{Ph}_3\text{P})_2\text{PdCl}_2$ (0.01 mmol), an alcohol (1.2 mmol), bases (Et_3N 1.0 mmol + Li_2CO_3 0.1 mmol), and THF (2 mL). The system was pressurized with carbon monoxide to 1 MPa, and the reaction mixture was then stirred at 100°C for 5 hours. The reaction mixture was analyzed and the product was determined and listed in the following table as Entry 6. This example was made in accordance with the production method of the present invention to produce fluorine-containing acrylic acid esters.

Entry	Base	Alcohol	Time	Conversion	Yield	
			h	%	1 (%)	2 (%)
1	Bu_3N	Methanol	15	84	24	49
2	Bu_3N	2-Propanol	66	96	36	32
3	Bu_3N	1-Butanol	3	98	20	40
4	Bu_3N	2-Butanol	6	93	16	38
5	Pr_3N	2,2-Dimethylpropanol	15	71	17	40
6	$\text{Et}_3\text{N}+\text{Li}_2\text{CO}_3$	Ethanol	5	100	82	3

As is clear from the results in the above table, the combined use of two types of bases like the present invention can drastically change the production ratio between the two types of products, thereby significantly improving the yield of the target product, fluorine-containing acrylic acid esters when compared to the yield obtained by the conventional methods.

As discussed above, the present invention employs the combination of arbitrary bases to drastically improve the yield of

fluorine-containing acrylic acid esters, and this cannot be expected by the teachings of the cited references.

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Kenji Tokuhisa

Kenji Tokuhisa